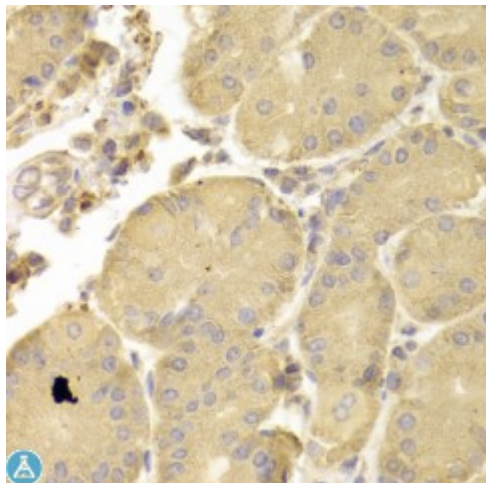


Anti-ATG7 Antibody



Description

This gene encodes an E1-like activating enzyme that is essential for autophagy and cytoplasmic to vacuole transport. The encoded protein is also thought to modulate p53-dependent cell cycle pathways during prolonged metabolic stress. It has been associated with multiple functions, including axon membrane trafficking, axonal homeostasis, mitophagy, adipose differentiation, and hematopoietic stem cell maintenance. Alternative splicing results in multiple transcript variants.

Model	STJ113569
Host	Rabbit
Reactivity	Human
Applications	IHC
Immunogen	Recombinant fusion protein containing a sequence corresponding to amino acids 500-676 of human ATG7 (NP_001129503.2).
Gene ID	10533
Gene Symbol	ATG7
Dilution range	IHC 1:50 - 1:100
Tissue Specificity	Widely expressed, especially in kidney, liver, lymph nodes and bone marrow
Purification	Affinity purification
Note	For Research Use Only (RUO).
Protein Name	Ubiquitin-like modifier-activating enzyme ATG7 ATG12-activating enzyme E1 ATG7 Autophagy-related protein 7 APG7-like hAGP7 Ubiquitin-activating enzyme E1-like protein

Molecular Weight	77.96 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage Instruction	Store at -20C. Avoid freeze / thaw cycles.
Database Links	HGNC:16935 OMIM:608760 Reactome:R-HSA-1632852
Alternative Names	Ubiquitin-like modifier-activating enzyme ATG7 ATG12-activating enzyme E1 ATG7 Autophagy-related protein 7 APG7-like hAGP7 Ubiquitin-activating enzyme E1-like protein
Function	E1-like activating enzyme involved in the 2 ubiquitin-like systems required for cytoplasm to vacuole transport (Cvt) and autophagy, Activates ATG12 for its conjugation with ATG5 as well as the ATG8 family proteins for their conjugation with phosphatidylethanolamine, Both systems are needed for the ATG8 association to Cvt vesicles and autophagosomes membranes, Required for autophagic death induced by caspase-8 inhibition, Required for mitophagy which contributes to regulate mitochondrial quantity and quality by eliminating the mitochondria to a basal level to fulfill cellular energy requirements and preventing excess ROS production, Modulates p53/TP53 activity to regulate cell cycle and survival during metabolic stress, Plays also a key role in the maintenance of axonal homeostasis, the prevention of axonal degeneration, the maintenance of hematopoietic stem cells, the formation of Paneth cell granules, as well as in adipose differentiation,
Cellular Localization	Cytoplasm
Post-translational Modifications	Acetylated by EP300,